

New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

1N5614 S2M
1N5616 S4M
1N5618 S6M
1N5620 S8M
1N5622 S0M

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

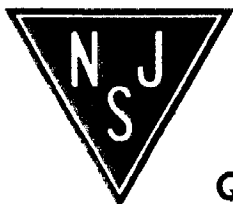
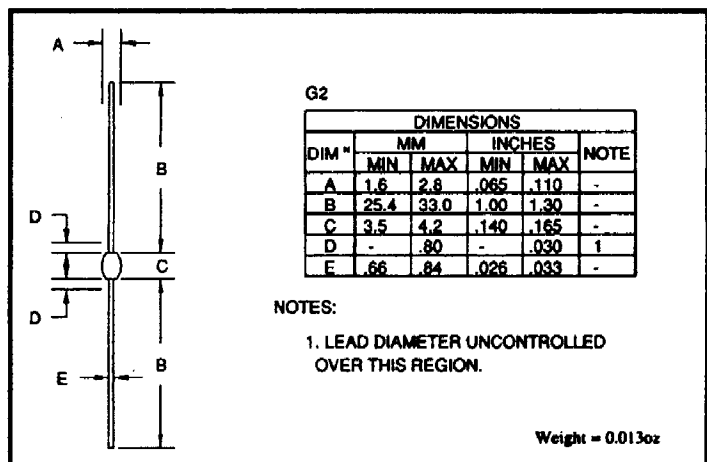
QUICK REFERENCE DATA AXIAL LEADED HERMETICALLY SEALED STANDARD RECOVERY RECTIFIER DIODE

- $V_R = 200 - 1000V$
- $I_F = 2.0A$
- $t_{rr} = 2\mu S$
- $V_F = 1.1V$
- Low reverse leakage current
- Hermetically sealed in Metoxillite fused metal oxide
- Good thermal shock resistance
- Low forward voltage drop
- Avalanche capability.

ABSOLUTE MAXIMUM RATINGS (@ 25°C unless otherwise specified)

	Symbol	1N5614	1N5616	1N5618	1N5620	1N5622	Unit
		S2M	S4M	S6M	S8M	S0M	
Working reverse voltage	V_{RWM}	200	400	600	800	1000	V
Repetitive reverse voltage	V_{RRM}	200	400	600	800	1000	V
Average forward current (@ 55°C, lead length 0.375")	$I_{F(AV)}$	←—————		2.0	—————→		A
Repetitive surge current (@ 55°C in free air, lead length 0.375")	I_{FRM}	←—————		10	—————→		A
Non-repetitive surge current ($t_p = 8.3mS$, @ V_R & T_{jmax})	I_{FSM}	←—————		30	—————→		A
Storage temperature range	T_{STG}	←—————		-65 to +175	—————→		°C
Operating temperature range	T_{OP}	←—————		-65 to +175	—————→		°C

MECHANICAL



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	1N5614	1N5616	1N5618	1N5620	1N5622	Unit
		S2M	S4M	S6M	S8M	S0M	
Average forward current (sine wave) - max. pcb mounted; T _A = 55°C - max. L = 3/8"; T _L = 55°C	I _{F(AV)}	←————— 1.0 —————→					A
	I _{F(AV)}	←————— 2.0 —————→					A
I ² t for fusing (t = 8.3mS) max.	I ² t	←————— 5.0 —————→					A ² S
Forward voltage drop max. @ I _F = 1.0A, T _j = 25°C	V _F	←————— 1.1 —————→					V
Reverse current max. @ V _{RWM} , T _j = 25°C	I _R	←————— 0.5 —————→					μA
@ V _{RWM} , T _j = 100°C	I _R	←————— 25 —————→					μA
Reverse recovery time max. 0.5A I _F to 1.0A I _R . Recovers to 0.25A I _{RR} .	t _{rr}	←————— 2.0 —————→					μS
Junction capacitance typ. @ V _R = 5V, f = 1MHz	C _j	←————— 23 —————→					pF
Thermal resistance - junction to lead Lead length = 0.375"	R _{θJL}	←————— 38 —————→					°C/W
Lead length = 0"	R _{θJL}	←————— 7 —————→					°C/W
Thermal resistance - junction to amb. on 0.06" thick pcb. 1 oz. copper.	R _{θJA}	←————— 95 —————→					°C/W

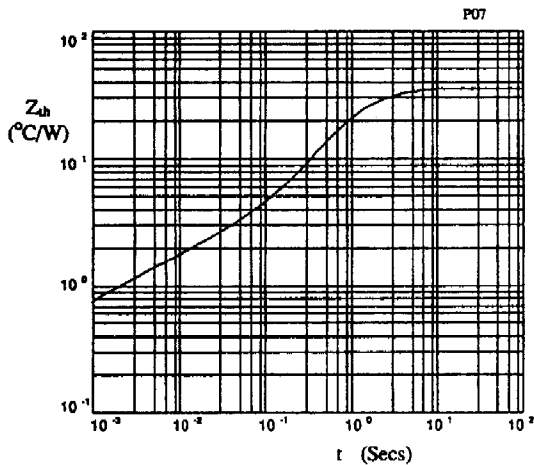


Fig 1. Transient thermal impedance characteristic.

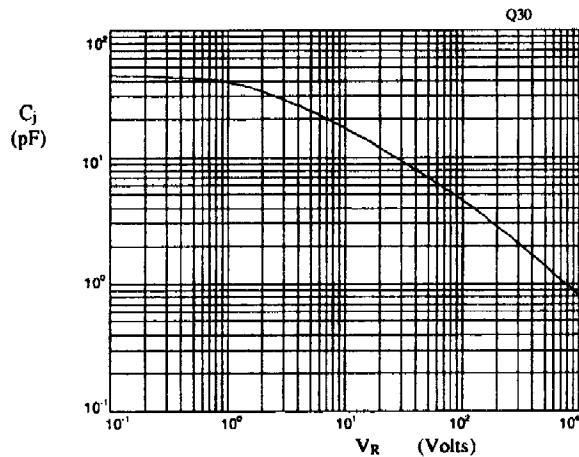


Fig 2. Typical junction capacitance as a function of reverse voltage.